

Applicant Name	Manhattan, Town of
Project Name	Manhattan Water System Improvements

Project Abstract

The origin of the Town of Manhattan's water system dates back to 1912 with the installation of asbestos cement and wood stave piping to supply water to the town. Upgrades to the system include wells installed in 1956, 1965, and 2001, as well as replacing wood stave piping and certain sections of asbestos cement piping with polyvinylchloride (PVC) pipe.

Today the water system falls below the standards established by the state for public water systems. The system has restrictions in water flow and no storage capacity, creating inadequate fire flows to the school and business district. The system is susceptible to viral and bacterial contamination created by lack of backflow prevention. Currently, the absence of water meters at individual services creates a strain on the system due to excessive usage. Dependence on manual control of the system is also draining on the supply source and a serious safety concern when the operator is absent or otherwise unable to operate the system. Alternatives were considered and compared to determine the best overall solution for Manhattan.

The preferred group of alternatives includes:

- Installation of two new storage tanks, one paid for directly by development impact fees and the other incorporated as part of the Preliminary Engineering Report (PER) identified project;
- Installation of backup power with automatic transfer capabilities at each source;
- Installation of a telemetry system for the entire water system;
- Construction of a fence around the chlorination house; and
- Installation of water meters with backflow prevention devices on all services.

Improvements to Manhattan's water system will benefit and protect the town and its water supply. Installing backflow prevention devices on each service will protect the system from backflow contamination. Water meters will contribute to water conservation and identification of leaks throughout the distribution system. Addition of water tanks and telemetry will give the system reliability and increased flows to provide safe, adequate fire protection to the whole town, especially to the school and business district.